A-1.0 INTRODUCTION

This document constitutes the City of Lake Forest's Local Implementation Plan (LIP) prepared pursuant to the Santa Ana Regional Water Quality Control Board's Order No. R8-2009-0030, NPDES No. CAS618030 and the City's Jurisdictional Runoff Management Plan (JRMP) prepared pursuant to the San Diego Regional Water Quality Control Board's Order No. R9-2009-0002, NPDES Permit No. CAS0108740 (collectively the *Fourth Term Permits*). For the purpose of clarity, the term LIP will mean both the LIP and JRMP.

This plan describes the activities that the City is undertaking to meet the requirements of the Fourth Term Permits and to make meaningful improvements in urban water quality. Although the LIP is intended to serve as the basis for City compliance during the five-year period of the Fourth Term Permits, the LIP is subject to modifications and updates as the City determines necessary, or as directed by the Regional Board.

A-1.1 BACKGROUND

The stormwater pollution control effort, of which this LIPis a part, is the result of three decades of legislative effort beginning with the 1972 Federal Water Pollution Control Act, subsequently known as the Clean Water Act (CWA). In 1987 the Water Quality Act brought stormwater discharges into the NPDES program and USEPA subsequently issued implementing regulations on November 16, 1990.

In response to these regulations the City of Lake Forest, County of Orange, the Orange County Flood Control District and the other incorporated cities of Orange County (collectively referred to as Permittees) have obtained, renewed and complied with NPDES Stormwater Permits from the Santa Ana and San Diego Regional Water Quality Control Boards. Each permit renewal has required the Permittees to continue to implement ongoing stormwater quality management programs and update and develop additional programs in order to control pollutants in stormwater discharges.

A-1.2 REGULATORY REQUIREMENTS

Section 402(p) of the CWA, as amended by the Water Quality Act of 1987, requires that municipal NPDES Permits include:

1. A requirement to effectively prohibit non-stormwater discharges into municipal storm sewers; and
2. Controls to reduce the discharge of pollutants from municipal storm drains to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

Regulations promulgated by EPA on November 16, 1990 (40 CFR 122.26 (d)(2)(iv)) require municipal NPDES permit applicants to develop a management program to effectively address these requirements. These also indicate that the proposed management program, such as the DAMP, "*shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate.*"

A-1.3 OBJECTIVES OF THE LOCAL IMPLEMENTATION PLAN

The main objectives of this document are to fulfill the commitment of the City to present a plan that satisfies the requirements of its NPDES Permits and to evaluate and reduce the impacts of urban stormwater on the beneficial uses of receiving waters that the City drains to. This LIP, in conjunction with the DAMP, is the principal policy and guidance document for the City's NPDES Stormwater Program. It is structured using the same organization, by section, as the DAMP and includes the following programs in subsequent sections:

1. Framework for program management activities and future plan development (**Section A-2.0** and **Section A-3.0**);

2. Legal authority for prohibiting unpermitted discharges to the storm drain system and for requiring BMPs in new development and significant redevelopment (**Section A-4.0**);

3. Municipal activities for pollution prevention and treatment to further reduce the amount of pollutants entering the storm drain system (**Section A-5.0**);

4. Educational program to communicate with the public about urban stormwater and non-stormwater pollution and obtain their support in implementing pollution prevention BMPs (**Section A-6.0**);

5. New development and significant redevelopment controls to incorporate appropriate and required post construction nonstructural and structural BMPs into the environmental planning and development review process (**Section A-7.0**);

6. Construction site controls that address appropriate and required practices for erosion and sediment control and on-site hazardous materials and waste management (**Section A-8.0**);

7. Existing development programs to prioritize, inspect and implement programs for commercial and industrial facilities (**Section A-9.0**);

8. Illegal discharges/illicit connections (ID/IC) program to detect and eliminate unpermitted discharges and unauthorized connections to the municipal storm drain system (**Section A-10.0**);

9. Monitoring programs for wet and dry weather to identify areas with water quality problems, to assist in the prioritization of watersheds for analysis and planning, and to assist in the prioritization of pollutants to facilitate the development of specific controls to address these problems (**Section A-11.0**); and

10. Watershed scale initiatives will be developed further through the completion of watershed specific chapters (**DAMP Appendix D**) and programs that will be developed during the Fourth Term Permit (**Section A-12.0**).

A-1.4 PERMITTEE COMMITMENTS

The Permittees are committed to maintaining the integrity of the receiving waters and their ability to sustain beneficial uses. As such, the Permittees have designed and implemented a countywide baseline stormwater management program in order to be able to continually re-assess the conditions of the waters within Orange

County and help determine the impact, if any, of urban stormwater discharges to the beneficial uses of those waters.

This baseline effort is complemented by the water quality planning process, which focuses resources on the impacts of urban stormwater discharges on beneficial uses, to assure that problems receive the available resources and attention. The Permittees have begun to prioritize these initiatives (**Section 3**) and will continue to analyze and evaluate the existing and future baseline monitoring program data to identify those watersheds exhibiting the most urgent need for attention.

A-1.5 DAMP/LIP COVERAGE

This document is applicable to the area of the City of Lake Forest which is within the jurisdiction of the Santa Ana and San Diego Regional Boards. The non-topographic boundary between Orange County and adjoining counties could result in certain Permittees being subjected to flows originating from or discharging to areas that are subject to separate NPDES municipal stormwater permits issued by the Regional Boards. The common drainage issues with Orange, Riverside and San Bernardino counties are being addressed through joint participation in integrated monitoring and research and program development initiatives.

A-1.6 DESCRIPTION OF DRAINAGE AREA AND CLIMATE

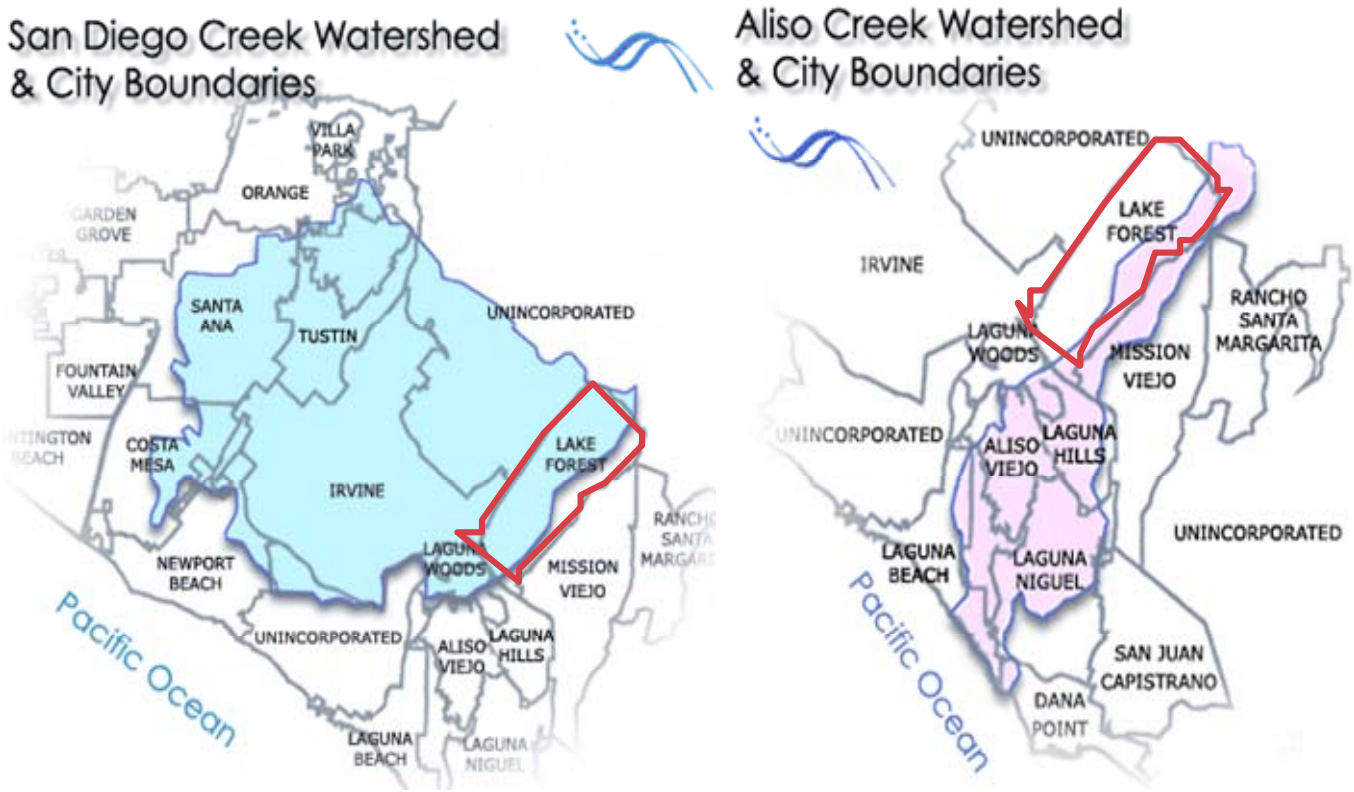
A-1.6.1 Geography and Climate

Orange County's climate has hot, dry summers and mild winters. Nearly all the annual precipitation falls in only a few storm events between October and April. During times of drought, it is not unusual for years to pass between major rainfalls. It is also common for successive storms of varying durations and intensities to compound their effects, with the heavy rainfall of the second or third storm creating the most severe flood conditions. On average, Orange County only receives a 12 to 13 inches of rain per year.

A-1.6.2 Watersheds

A watershed is an area of land where water drains through a series of creeks, rivers and bays into a common body of water often termed receiving water. The City of Lake Forest is located within the Newport Bay and Aliso Creek Watersheds.

Figure A-1.1 Regional Map – City of Lake Forest



A-1.6.3 Environmentally Sensitive Areas (ESAs)/Impaired Waters

Environmentally Sensitive Areas (ESAs)

ESAs are defined by the San Diego Regional Board as those areas that include, but are not limited to:

- All CWA Section 303(d) impaired waters;
- Areas designated as Areas of Special Biological Significance by the SWRCB in the Water Quality Control Plan for the San Diego Basin Plan;
- Water bodies designated with the RARE Beneficial Use category by the SWRCB in the Basin Plan (RARE);
- Areas designated as preserves or their equivalent under the Natural Communities Conservation Planning Program (NCCP); and
- Any other ESAs identified by the city.

Although the Santa Ana Permit does not include a definition of ESA's, for the purposes of this LIP, the following categories have been included as ESA's:

- CWA Section 303(d) impaired waters listed for sediment or turbidity; and
- Areas that are tributary to or within 500 feet of an Area of Special Biological Significance.

The ESAs identified in the City are listed in **Table A-1.1.**

CWA Section 303(d) Water Quality Limited Segments of Receiving Waters

Under Section 303(d) of the CWA, states are required to develop lists of water quality limited segments of receiving waters (impaired waters). These impaired waters do not meet water quality standards or support designated water uses. The 2010 303(d) list of water quality limited segments (**Table A-1.1)** has been sent to USEPA Region IX and is now awaiting final approval. Once the list is formally approved by EPA, **Table A-1.1** will be amended as necessary.

Table A-1.1.
Watersheds, ESAs, 303(d) Pollutants and TMDL status for Waterbodies in City of Lake Forest

Watershed	Hydrologic Area/Sub-Area	Waterbody	ESA	303(d) Pollutant/ Stressor	TMDL Status
Santa Ana Region					
		Serrano Creek (Pending SWRCB, OAL, EPA approval)		*Ammonia (unionized), pH*	*2021*
San Diego Region					
Aliso Creek	*Aliso*	*Aliso Creek, English Canyon, Pacific Ocean*		*Indicator Bacteria, Phosophorus, Toxicity*	

Source: State Water Resources Control Board

These impaired waters are shown in the maps attached as **Exhibit A-1.I**.

A-1.7 MODEL PROGRAMS

Since 1991, the City has cooperated with the County of Orange, the Orange County Flood Control District and the other cities in Orange County (the Permittees) in complying with the National Pollutant Discharge Elimination System (NPDES) permits issued by the Santa Ana and San Diego Regional Water Quality Control Boards. The result of this cooperation has been the iterative development of the eleven model stormwater program elements (see **Section 1.6**) that comprise the area-wide Drainage Area Management Plan (DAMP).

The DAMP was first completed in 1992 and approved by the Santa Ana Regional Board in 1994 and the San Diego Regional Board in 1996. The current structure of the DAMP was completed in 2003 at which time the DAMP was expanded to the following appendices:

- Appendix A - The LIPs/JURMPs developed by the Permittees
- Appendix B – Education, Training and Outreach Component
- Appendix C – Program Effectiveness Assessment Component
- Appendix D – Watershed Components (to be developed)
- Appendix E – Technical Reports

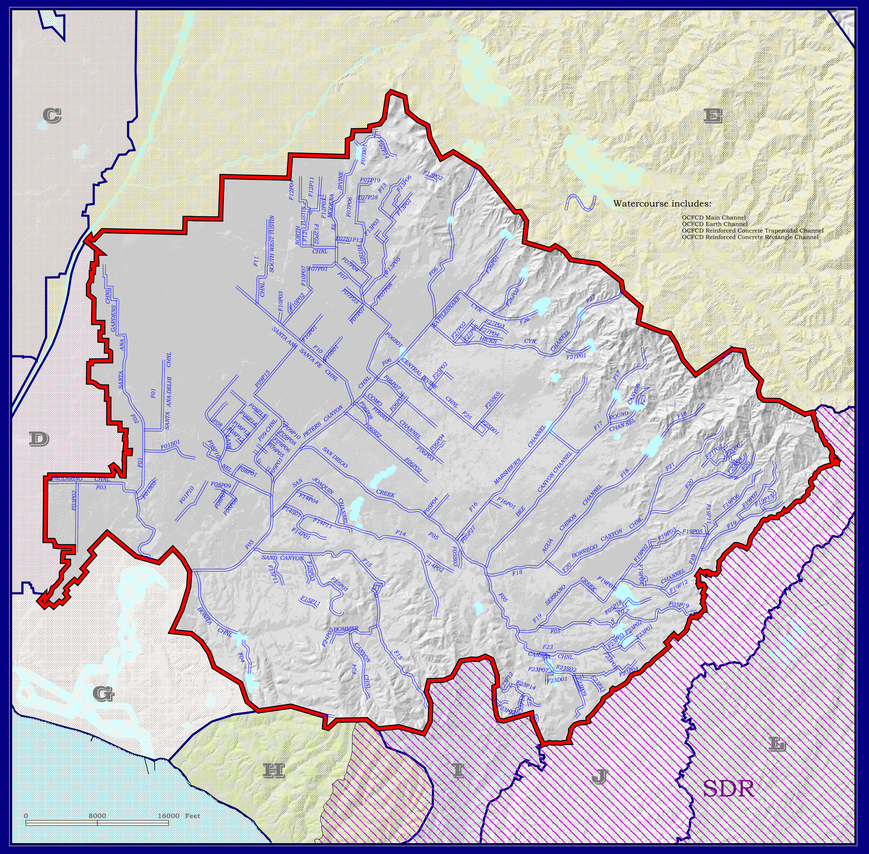
In developing this LIP, the City of Lake Forest has utilized the DAMP as the foundation for its program development and the two documents, in effect, act as companion parts of the City's compliance program.

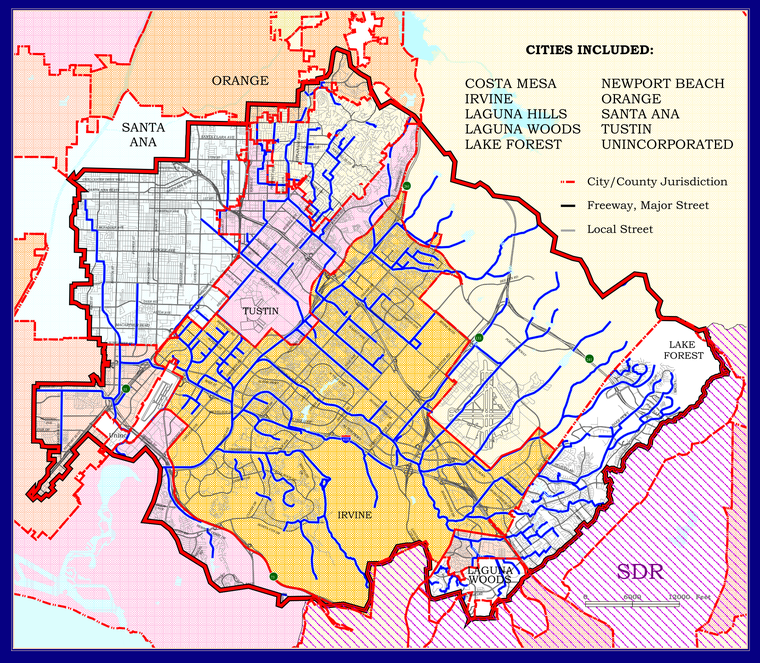
A-1.8 PROGRAM ASSESSMENT AND MODIFICATION

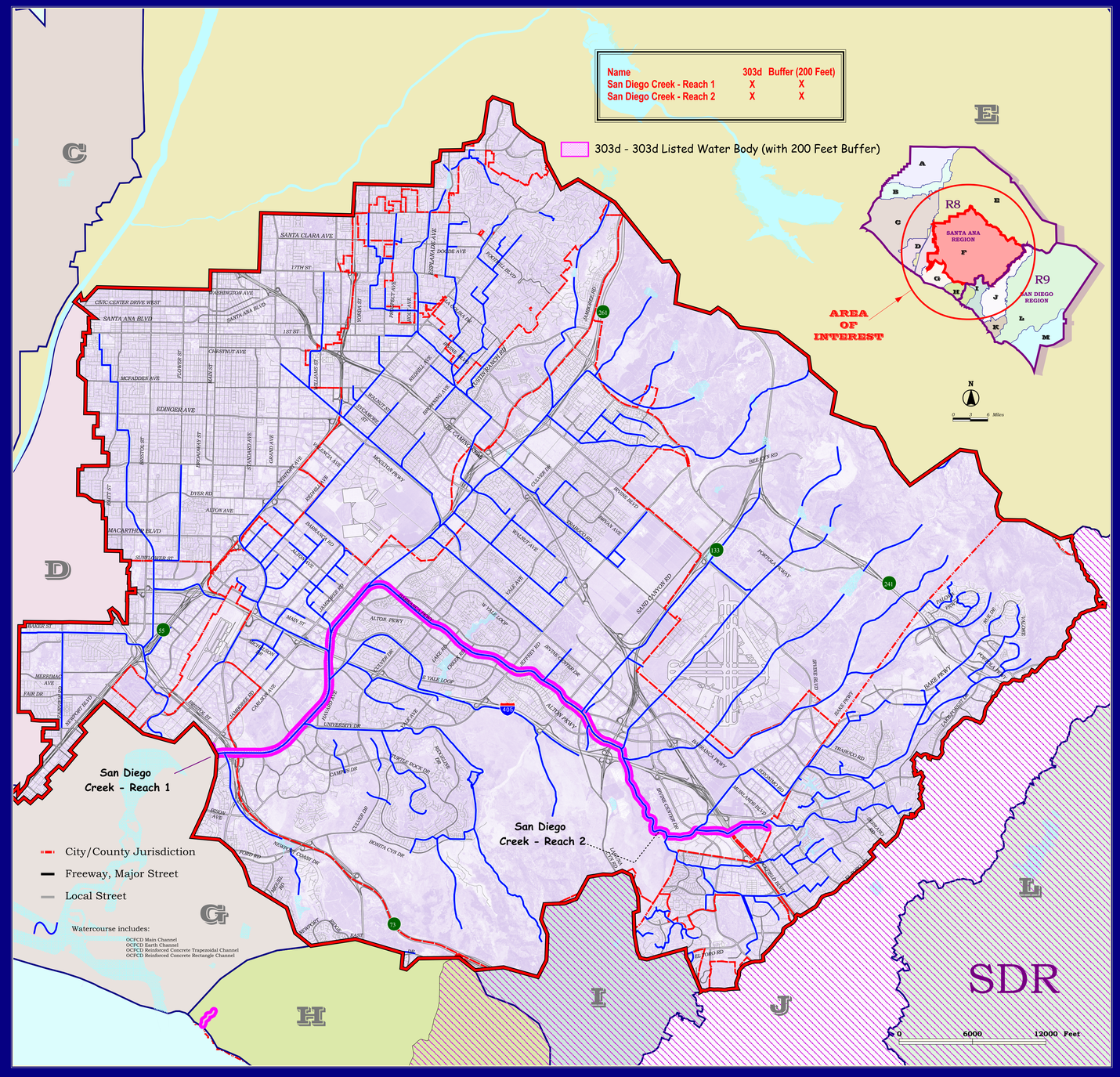
The Program Effectiveness Assessment (PEA) is the foundation for the Annual Progress Report that is submitted each year to the Regional Boards. This report presents an evaluation of this LIP which is used to determine where modifications within the program may be necessary. It also ensures that the iterative evaluation and improvement process is applied to each of the program components and is used as an effective management tool (See **Section A-3.0**).

Exhibit A-1.I

Impaired Waters Maps







WATERSHED F: SAN DIEGO CREEK

ENVIRONMENTALLY SENSITIVE AREAS

COUNTY OF ORANGE, CALIFORNIA

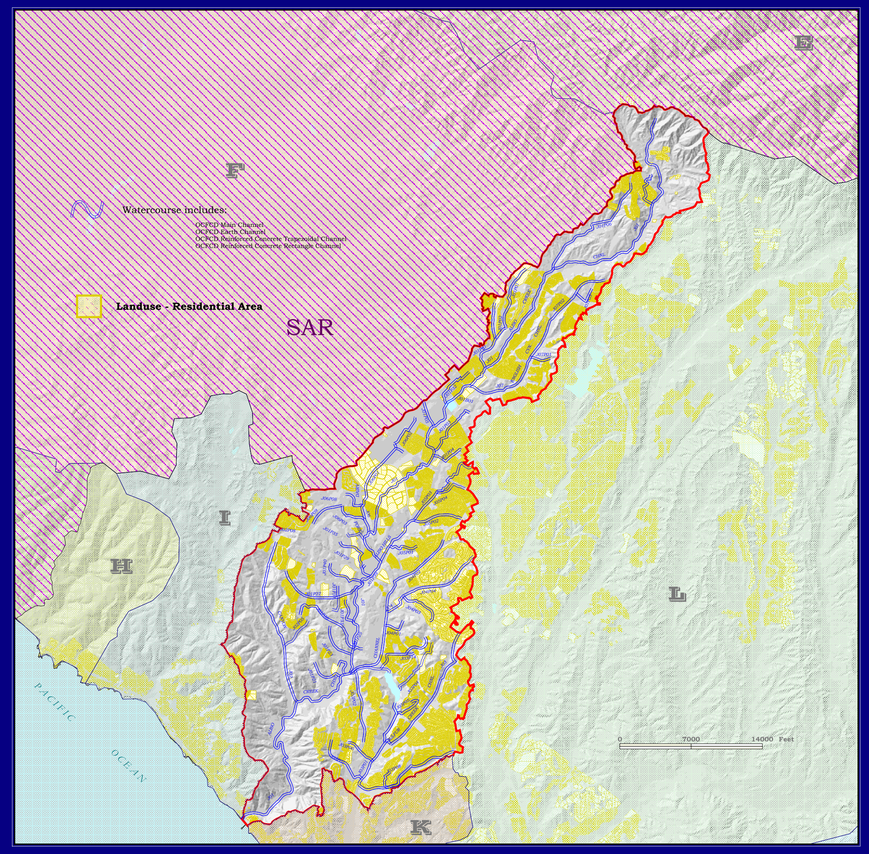
86822 Acres

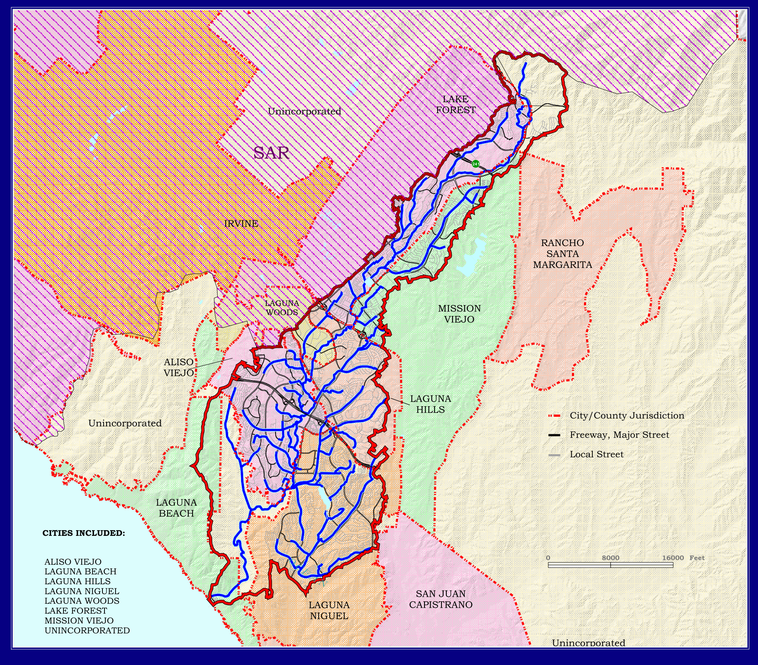
DESIGNED AND PRODUCED BY:
GIS Mapping Unit
Public Facilities and Resources Department
Carmen Copil Oancea

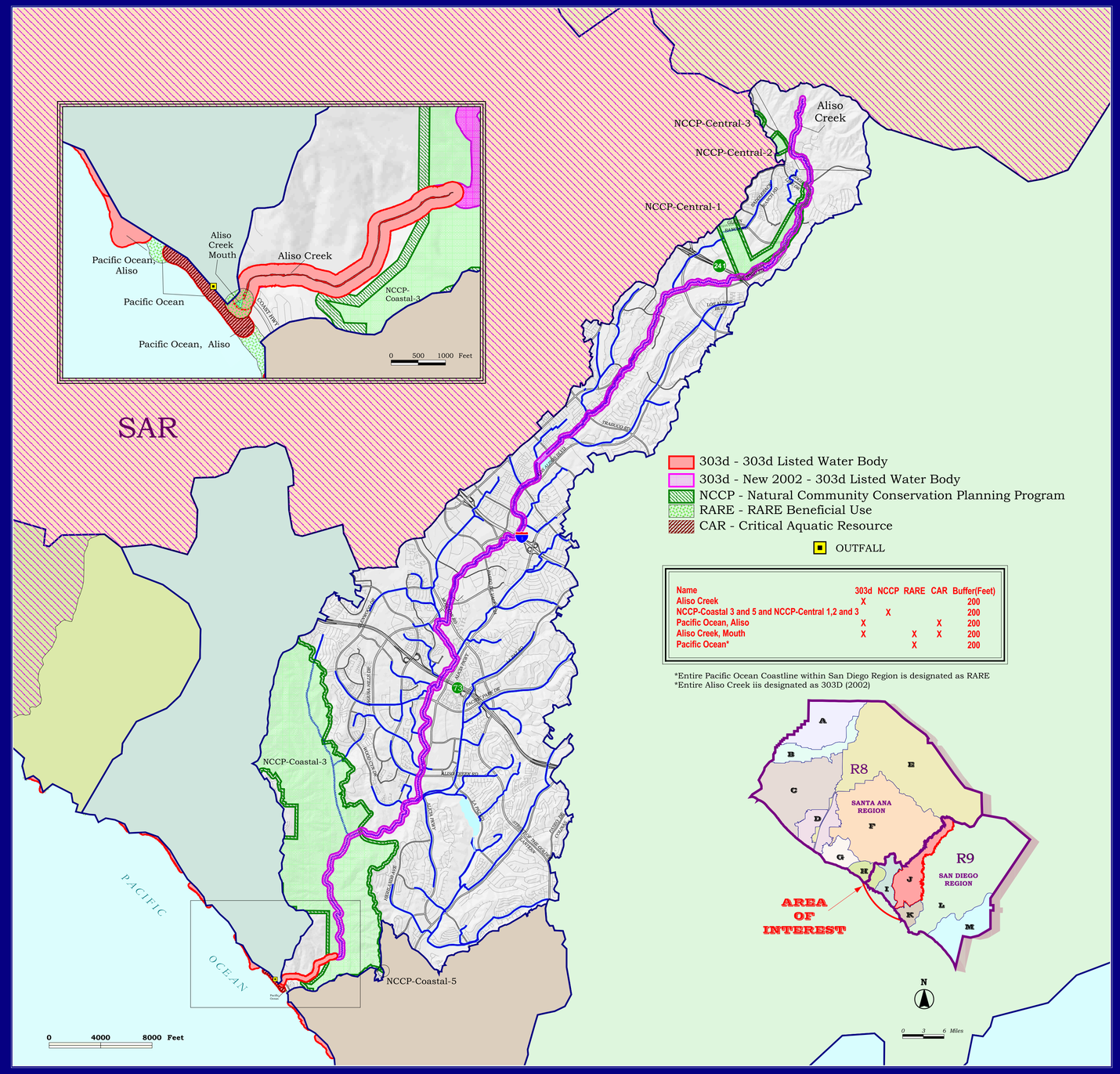
DATA SOURCE:
Geomatics Land Information System Division
Eagle Aerials, 2001
USGS 10 Meter DEM, 1999

The degree of accuracy of the data sets differs. The source of the data as well as its intent determines its correctness and precision. Therefore, Geomatics/LISI/GIS disclaims any responsibility of any nature arising out of or resulting from accuracy or correctness of the data or use of the data sets, except where expressly stated.

DATE: November 13, 2003







Name	303d	NCCP	RARE	CAR	Buffer(Feet)
Aliso Creek	X				200
NCCP-Coastal 3 and 5 and NCCP-Central 1,2 and 3		X			200
Pacific Ocean, Aliso	X			X	200
Aliso Creek, Mouth	X		X	X	200
Pacific Ocean*			X		200

*Entire Pacific Ocean Coastline within San Diego Region is designated as RARE
*Entire Aliso Creek iis designated as 303D (2002)

WATERSHED J : ALISO CREEK

ENVIRONMENTALLY SENSITIVE AREAS

COUNTY OF ORANGE, CALIFORNIA

22312 Acres

DESIGNED AND PRODUCED BY:
GIS Mapping Unit
Public Facilities and Resources Department
Carmen Copil Oancea

DATA SOURCE:
Geomatics Land Information System Division
USGS 10 Meter DEM, 1999

The degree of accuracy of the data sets differs. The source of the data as well as its intent determines its correctness and precision. Therefore, Geomatics/LIS/GIS/disclaims any responsibility of any nature arising out of or resulting from accuracy or correctness of the data or use of the data sets, except where expressly stated.

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